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EXAMINER

LEE, CHEUKFAN

ART UNIT PAPER NUMBER

2625

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/746,333	<b>Applicant(s)</b> CLIFTON, LORI	
	<b>Examiner</b> Cheukfan Lee	<b>Art Unit</b> 2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 12-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The finality of the rejection dated July 2, 2004 is withdrawn. Claims 1, 3-10 and 12-20 are pending.

Applicant's arguments with respect to claims 1, 3-10 and 12-20 have been considered but are moot in view of the new ground(s) of rejection. Clark et al. (U.S. Patent No. 4,757,389) and Wang (U.S. Patent No. 6,111,244) are the only new references applied in the rejections below.

2. Claims 13-16 are objected to because of the following:

Claims 13-16 each claim "supporting a calibration target" or "supporting a target". However, claim 10 upon which claims 13-16 depend has been amended to replace "supporting" with "permanently providing". Further, when a term is referring to a basis already set forth, -- the -- or -- said -- should be used in front of the term.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (U.S. Patent No. 4,757,389) in view of Wang (U.S. Patent No. 6,111,244).

Regarding claim 1, Clark discloses a scanner comprising the following:

a window (20), a housing (12) including an inside and an outside, a first side (top side of 12, including 18) supporting the window (20), having an inside surface (where 90 is) and an outside surface (18), and a second side (base 13) having an inside surface opposite the inside surface (where 90 is) of the first side (top side of 12, including 18) and having an outside surface;

a scanning array (35 in scanning carriage 26) movable in the housing (12) relative to the window (20) along a scanning path (along rails 29), a scanning carriage (26) for supporting the scanning array (35) therein and generally facing the first side (top side of 12, including 18); and

a calibration target (90) supported inside the housing (12) within the scanning path, on the inside surface of the first side (top side of housing 12, including 18) and spaced apart from the window (20), the calibration target (90) generally facing the inside surface of the second side (base 13), in operation (Fig. 1, col. 2, line 48 – col. 3, line 32).

Clark et al. differs from the claimed invention in the position of the scanning array (35). The scanning array (35 in carriage 26) of Clark et al. is generally facing an end (16) of the housing (12), while the claimed scanning array is generally facing the first side (corresponding to the top side of the housing 12 of Clark et al.). However, an arrangement of a scanning array as claimed in a scanner is not novel and is taught by Wang (Fig. 14).

Wang's image sensor comprises a scanning array (image sensor array 7), among other components, shown to be generally facing the top side of the scanner (col.

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10, lines 12-24). The arrangement of the image sensor (7) takes advantage of the simplicity of CMOS technology and other advantages. One line of the sensor array (7) is suitable for both B/W (black and white) and color applications (col. 9, lines 12-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the image sensor of Clark et al. having the scanning array (35) and other components with an image sensor having an image sensor array generally facing the top side of a scanner of Wang, so that the scanning array (image sensor) is generally facing the inside surface of the first side of the scanner, in order to provide a scanner for sensing both a black and white image and a color image.

Regarding claim 3, the scanning array of the obvious scanner of Clark et al. in view of Wang is a color capable array (see Wang, col. 9, lines 12-21).

Claim 10 is rejected as being a method claim corresponding to the rejected apparatus claim 1. Please note that according to the structure of the scanner (10) of Clark et al. shown in Fig. 1, it is inherent that the calibration target (90) is permanently provided inside the housing (12), prior to delivery to an end user (col. 2, lines 48-68).

Claim 12 is rejected as being a method corresponding to the rejected apparatus claim 3.

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5. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (U.S. Patent No. 4,757,389) in view of Wang (U.S. Patent No. 6,111,244) as applied to claims 3 and 12 above, and further in view of Fukushi (U.S. Patent No. 6,226,105), cited in the previous Office Action.

Regarding claims 4 and 13, either of Clark et al. and Wang discloses that the scanner and a monochrome printer are commonly housed in the housing.

Clark et al. discloses that the image data processed in a scanner is for further processing and use (col. 1, lines 10-15). Although Clark et al. and Wang do not disclose a printer, one of ordinary skill in the art would have realized that "further use", in Clark et al., of the image data generated by the scanner includes any of or a combination of printing, storing in a storage medium, communicating to a destination, etc.

Fukushi discloses that a flat bed scanner and a printer are advantageously placed in the same housing (col. 2, lines 37-40, col. 3, lines 49-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the scanner of Clark et al. in view of Wang and a printer placed in the same housing as taught by Fukushi to take advantage of the fact that a single housing or unit has a better appearance than more than one housing or unit.

With regard to the claimed monochrome printer, Fukushi does not explicitly disclose that the printer in the single housing is a monochrome printer. However, Fukushi does not disclose that the printer cannot be used; it is just that a thermal

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transfer type or thermal sublimative type of full-color printer is "preferably" used (col. 9, lines 1-5). Since the scanning array of Clark et al. in view of Wang discussed for claim 1 above is also suitable for black and white (B/W) applications (see Wang, col. 9, lines 12-21), one of ordinary skill in the art would have realized the advantage of using a monochrome printer (black and white printer) to print a black and white image.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a monochrome printer in the single housing of Clark et al. in view of Wang and Fukushi discussed above, in order to print black and white images and reduce cost compared to employ a color printer.

6. Claim 5-7 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (U.S. Patent No. 4,757,389) in view of Wang (U.S. Patent No. 6,111,244) as applied to claims 1 and 10 above, and further in view of Motamed (U.S. Patent No. 6,327,047), cited in the previous Office Action.

Regarding claim 5, the scanner of Clark et al. and Wang is discussed above for claim 1. Clark et al. does not disclose that the calibration target is a color target. The calibration target of Clark et al. is a grey target (col. 3, lines 33-35). However, using a color target as a calibration target to calibrate a scanner is not novel and is taught by Motamed (see IT8 calibration target) (col. 1, lines 42-43, col. 5, lines 49-51, col. 1, lines 10-52).

Since the scanning array of the scanner of Clark et al. in view of Wang discussed for claim 1 above is suitable for color application (see Wang, col. 9, lines 12-21), it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Motamed to employ a color target as a calibration target of Clark et al. in view of Wang in order to calibrate the scanner as a color scanner.

Regarding claim 6, the scanner of Clark et al. in view of Wang is discussed for claim 1. The calibration target of Clark et al. is a grey target (col. 3, lines 33-35), not a black target as claimed. However, using a black target as a calibration target to calibrate a scanner is not novel and is taught by Motamed (col. 1, lines 35-42). The selected calibration target, Kodak® Gray Scale, comprises patches of varying densities of gray, which inherently includes a black patch.

Since the scanning array of the scanner of Clark et al. in view of Wang discussed for claim 1 above is suitable for black and white (B/W) application (see Wang, col. 9, lines 12-21), it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Motamed to employ a black target as a calibration target of Clark et al. in view of Wang, in order to calibrate the scanner as a black and white scanner.

Regarding claim 7, the feature of a color target as a calibration target is discussed above for claim 5. The IT8 calibration target of Motamed discussed for claim 5 comprises color patches (col. 1, lines 42-43, col. 5, lines 49-51), the number of which includes three. (Fig. 4 shows more than three color patches.) The color patches are inherently used for color registration (col. 1, lines 10-52). As discussed for claim 5



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above, the scanning array of the scanner of Clark et al. in view of Wang is suitable for color application (see Wang, col. 9, lines 12-21). The feature of supporting the calibration target(s) inside the housing on the inside surface of the first side and spaced apart from the window, proximate the window, and facing the second side is taught by Clark et al. as already discussed for claim 1 above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Motamed to employ three color targets as calibration targets of Clark et al. in view of Wang for color calibration as suggested by Motamed.

Claims 14-16 are rejected as being method claims corresponding to the rejected apparatus claims 5-7, respectively.

7. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (U.S. Patent No. 4,757,389) in view of Wang (U.S. Patent No. 6,111,244) as applied to claims 1 and 10 above, and further in view of Selby (U.S. Patent No. 5,404,232), also cited in the previous Office Action.

Regarding claim 8, the scanner of Clark et al. in view of Wang is discussed above for claim 1. In Clark et al., a power switch, coupled to the scanning array (35) and the motor (32), for turning the scanner on and off, is inherent (col. 2, lines 56-68, Fig. 1). Further, logic circuitry as claimed, i.e., coupled to the power switch, the scanning array (35), and the motor (32), and configured to effect movement of the scanning array (35 in scanning carriage 26) to scan the calibration target (see 90 in Fig. 1), is inherent in a controller of the scanner.

As to the claimed logic circuitry (see above paragraph) being configured to effect the movement of the scanning array to scan the calibration in response to the scanner being turned on, Clark et al. discloses performing a calibration scan (of the calibration target 90) in a "prescan cycle" before "subsequent scanning" (col. 3, lines 33-58). The idea of performing a scanner calibration process at the daily power-up of a scanner to ensure good performance of the scanner is not novel as is taught by Selby (col. 1, lines 31-50). One of ordinary skill in the art would have realized that in this case of Clark et al. that the calibration scan is performed in every prescan cycle, calibration is performed more often compared to a case in which calibration scan is performed in response to the scanner being turned on, and if the length of the time of the operation which includes the calibration scan in the prescan cycle and a subsequent actual scan of the original document is critical to the operator, that performing the calibration scan at scanner power-up instead of in every prescan cycle reduces the operator's wait time. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the idea of Selby to modify the control system of the scanner of Clark et al. in view of Wang such that the calibration target is scanned in response to the scanner being turned on, in order to reduce an operator's wait time.

For claim 17, see discussion for claim 8 with respect to the logic circuitry configured to effect the movement of the scanning array to scan the calibration in response to the scanner being turned on.

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8. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (U.S. Patent No. 4,757,389) in view of Wang (U.S. Patent No. 6,111,244) and Selby (U.S. Patent No. 5,404,232) as applied to claims 8 and 17 above, and further in view of Motamed (U.S. Patent No. 6,327,047), cited in the previous Office Action.

Regarding claim 9, the scanner of Clark et al., Wang and Selby is discussed above for claim 8. Clark et al. does not disclose that the calibration target is a color target. The calibration target of Clark et al. is a grey target (col. 3, lines 33-35). However, using a color target as a calibration target to calibrate a scanner is not novel and is taught by Motamed (see IT8 calibration target) (col. 1, lines 42-43, col. 5, lines 49-51, col. 1, lines 10-52).

Since the scanning array of the scanner of Clark et al. in view of Wang and Selby discussed above for claim 8 (which depends on claim 1) is suitable for color application (see Wang, col. 9, lines 12-21, and see discussion for claim 1 with regard to the scanning array), it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Motamed to employ a color target as a calibration target of Clark et al. in view of Wang in order to calibrate the scanner as a color scanner.

As to the number of color calibration targets, the IT8 calibration target of Motamed mentioned above comprises color patches (col. 1, lines 42-43, col. 5, lines 49-51), the number of which includes three. (Fig. 4 shows more than three color patches.) The color patches are inherently used for color registration (col. 1, lines 10-52). As discussed above, the scanning array of the scanner of Clark et al. in view of Wang and

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Selby is suitable for color application (see Wang, col. 9, lines 12-21). The feature of supporting the calibration target(s) inside the housing on the inside surface of the first side and spaced apart from the window, proximate the window, and facing the second side is taught by Clark et al. as already discussed for claim 1 above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Motamed to employ three color targets as calibration targets of Clark et al. in view of Wang and Selby for color calibration as suggested by Motamed.

Further, the inherent logic circuitry discussed for claim 8 above, that is coupled to the power switch, the scanning array (35), and the motor (32), and configured to effect movement of the scanning array (35 in scanning carriage 26) to scan the calibration target (see 90 in Fig. 1), is inherently configured to perform a calibration in response to scanning the three color calibration targets in the above obvious scanner of Clark et al. in view of Wang, Selby and Motamed.

For claim 18, see discussion for claim 9 with respect to the inherent logic circuit being inherently configured to perform a calibration in response to scanning the three color calibration targets.

9. Claims 19 and 20 are allowed.

10. The following is an examiner's statement of reasons for allowance:

Claim 19 is allowable over the prior art of record, including the references applied in the rejections above, Clark et al. (4,757,389), Wang (6,111,244), Motamed

(6,327,047), Selby (5,404,232), and Fukushi (6,226,105), alone or in combination.

These references each disclose one or more but not all limitations of claim 20, such that when combined, they may provide a structure of a multifunction device somewhat similar to the structure of the device of claim 19. However, these references, alone or in combination, do not teach the claimed structure including the "sub-housing" of the color flatbed scanner supported in the "housing", and the positional relationship of the housing, the sub-housing, the calibration targets, etc. Fukushi, the reference closest to the claimed "housing" (Fukushi discloses that a flat bed scanner and a printer are advantageously placed in the same housing, see col. 2, lines 37-40, col. 3, lines 49-55, Fig. 2) does not disclose a sub-housing of a scanner having a structure as that defined in claim 19. Thus, the feature of the sub-housing in the housing, in combination with other limitations of claim 19, is not taught by the prior art of record, alone or combined.

Claim 20 depends on claim 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lin et al. (U.S. Patent No. 6,094,512) discloses an image reading apparatus including an upper housing and a pattern located on the bottom surface of the upper

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housing and positioned at a position x with reference to the edge of the opening, the upper housing having a bottom surface and being provided with the opening for mounting a transparent platen for supporting a document to be scanned, the opening defining the edge.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (571) 272-7407. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee  
May 18, 2006

  
*Cheukfan Lee*